2003 WATER QUALITY TABLE
Buckman Wellfield

The table below are values for all of the drinking water compounds that were detected in our drinking water during the calendar year of this report or the most recent test if a sample was not analyzed in 2003. The contaminants detected represent a small fraction of the substances that we test for. For example, we tested for over 50 synthetic organic and volatile organic contaminants, which were not detected. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report or the result of the most recent test. The EPA or the State requires us to monitor for certain contaminants less than once per year because concentrations of these contaminants do not change frequently.

Contaminant (Units) Inorganic Contaminants	MCLG	MCL	2003 City Water Levels	2002-2003 Range Low	High	Sample Date	Violation	Typical Source
Arsenic (ppb)	NA	50	7	6	7	9-Sep-03	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.1	NA	NA	25-Feb-03	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium (ppb)	5	5	ND	ND	ND	25-Feb-03	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.
Chromium [Total] (ppb)	100	100	5	2	10	25-Feb-03	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	No Data 2003	0.28	0.47	20-Mar-02	No	Erosion of natural deposits; Water additive which promotes s trong teeth; Discharge from fertilizer and aluminum factories
Nickel (ppb)	MNR	MNR	ND	ND	ND	25-Feb-03	No	Erosion of natural deposits
Nitrate [as N] (ppm)	10	10	1.3	0.2	1.9	25-Feb-03	No	Runoff from fertilizer use; Leaching from septic
Selenium (ppb)	50	50	ND	ND	1.8	25-Feb-03	No	Discharge from petroleum and metal refineries; Erosion of naturaldeposits; Discharge from mines
Radioactive Contaminants								
Alpha Emitters (pCi/l)	0	15	10.1	9.6	10.1	17-Mar-03	No	Erosion of natural deposits
Beta/Photon Emitters (pCi/l)	NA	NA	18.7	1	18.7	12-Aug-03	No	Decay of natural and man-made deposits. The EPA considers 50 pCil to be the level of concern for beta particles.
Combined Radium 226/228 (pCi/l)	0	5	0.13	0.1	0.13	17-Mar-03		Erosion of natural deposits
Uranium (ug/l)	0	30	9	9	47	17-Mar-03	No	Erosion of Natural Deposits
Disinfectants & Disinfection By-Products								
Haloacetic Acids (HAA5s) (ppb)	NA	60	2.6	ND	4.6	31-Dec-03	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethane] (ppb)	NA	80	.35	0.3	0.5	31-Dec-03	No	By-product of drinking water chlorination

Units Description:
NA: Not Applicable; **ND:** Not Detected; **MNR:** Monitoring not required, but recommended; **ppm:** parts per million, or milligrams per liter (mg/l)**;**
ppb: parts per billion, or micrograms per liter (ug/l); **pCi/l:** picocuries per liter (a measure of radioactivity); **ug/l:** Number of micrograms of subtanstance per liter of water**;**
Range: The range represents the high and low values. Range values are not given if only one sample was taken during the range period.

2003 WATER QUALITY TABLE
City Wellfield

The table below are values for all of the drinking water compounds that were detected in our drinking water during the calendar year of this report or the most recent test if a sample was not analyzed in 2003. The contaminants detected represent a small fraction of the substances that we test for. For example, we tested for over 50 synthetic organic and volatile organic contaminants, which were not detected. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report or the result of the most recent test. The EPA or the State requires us to monitor for certain contaminants less than once per year because concentrations of these contaminants do not change frequently.

Contaminant (Units)	MCLG	MCL	2003 City Water Level	2002-2003 Range Low	High	Sample Date	Violation	Typical Source
Inorganic Contaminants								
Arsenic (ppb)	NA	50	4.2	ND	4.2	24-Feb-03	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.534	0.2	0.534	14-Jul-03	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium [Total] (ppb)	100	100	1.1	ND	1.1	14-Jul-03	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	No Data 2003	0.14	0.17	20-Mar-02	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nickel (ppb)	MNR	MNR	1.22	ND	1.22	14-Jul-03	No	Erosion of natural deposits
Nitrate [as N] (ppm)	10	10	4.29	3.2	7.4	31-Dec-03	No	Runoff from fertilizer use; Leaching from septic
Thallium (ppb)	0.5	2	0.06	ND	0.06	14-Jul-03	No	Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories
Radioactive Contaminants								
Alpha Emitters (pCi/l)	0	15	No Data 2003	0.8	2.2	12-Aug-02	No	Erosion of natural deposits
Beta/Photon Emitters (pCi/l)	NA	NA	3.6	0.3	3.6	12-Aug-02	No	Decay of natural and man-made deposits. The EPA considers 50 pCi/l to be the level of concern for beta particles.
Disinfectants & Disinfection By-Products								
Haloacetic Acids (HAA5s) (ppb)	NA	60	3.9	0.1	6.56	31-Dec-03	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethane] (ppb)	NA	80	7.98	2.05	14	31-Dec-03	No	By-product of drinking water chlorination

Units Description:
NA: Not Applicable; **ND:** Not Detected; **MNR:** Monitoring not required, but recommended; **ppm:** parts per million, or milligrams per liter (mg/l)**;**
ppb: parts per billion, or micrograms per liter (ug/l); **pCi/l:** picocuries per liter (a measure of radioactivity); **ug/l:** Number of micrograms of subtanstance per liter of water**;**
Range: The range represents the high and low values. Range values are not given if only one sample was taken during the range period.

City of Santa Fe Water Division
P.O. Box 909, Santa Fe, NM 87504

Customer Service (505) 955-4333
Administration (505) 955-4202

2003 WATER QUALITY REPORT

INTRODUCTION

This is an annual report on the quality of drinking water delivered by the City of Santa Fe's Sangre De Cristo Water Division (SDCW) to its customers. SDCW is subject to the federal Safe Drinking Water Act and is required to test and meet United States Environmental Protection Agency (EPA) and State of New Mexico Drinking Water Standards. This report contains information on calendar year 2003 water quality tests. Additional details about where your water comes from, what it contains, and how it compares to standards set by federal and state regulatory agencies are also included. A safe and dependable water supply is vital to our community and is the primary mission of SDCW.

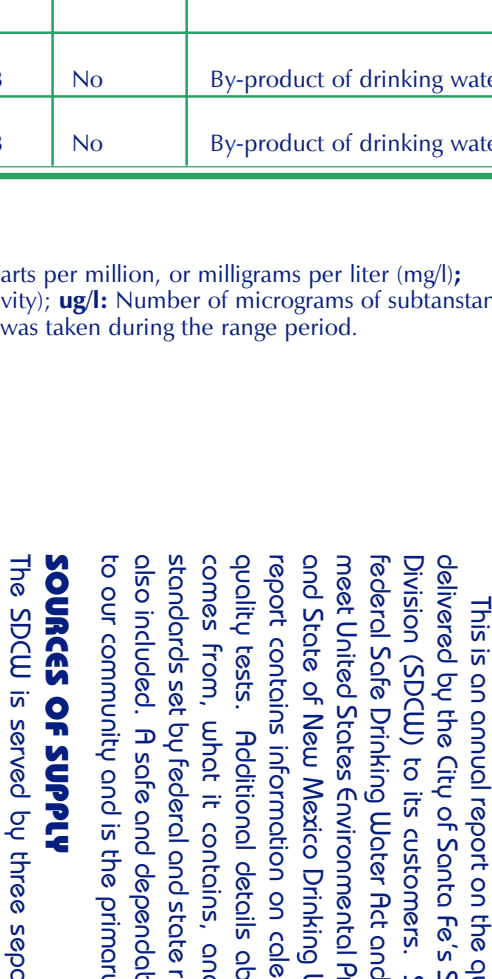
SOURCES OF SUPPLY

The SDCW is served by three separate sources of water supply. These are the Buckman well field, the City well field and surface runoff generated by the Santa Fe Watershed. The Buckman well field consists of 13 active wells located near the Rio Grande, approximately 15 miles northwest of Santa Fe. The City well field is mostly located in close proximity to the Santa Fe River and consists of 8 active wells located within the City of Santa Fe limits. The City's surface water supply is generated by runoff from the 17,000 acre Santa Fe watershed. The runoff drains into the Santa Fe River where it is stored at the McClure and Nichols Reservoir.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Map of Water Sources



EN ESPAÑOL

Este reporte contiene informacion importante sobre la calidad delagua en Santa Fe. Si tiene alguna pregunta o duda sobre este reporte puede hablarle a Gary Martinez al telephono 505.955.4370.

Source water assessment and its availability

In calendar year 2002 and 2003 the New Mexico Environment Department (NMED) conducted and completed the Source Water Assessment for the City of Santa Fe. This assessment includes a determination of source water protection areas and an inventory of pollution sources within the areas of concern. NMED concluded: "The Susceptibility

TERMS AND ABBREVIATIONS

Maximum contaminant level goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum contaminant level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Treatment technique(TT):A required process intended to reduce the level of a contaminant in drinking water.
Action level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

2003 WATER QUALITY REPORT

Analysis of the City of Santa Fe water utility reveals that the utility is well maintained and operated, and the sources of drinking water are generally protected from potential sources of contamination based on an evaluation of the available information. The susceptibility rank of the entire water system is **moderately low.**" A copy of this report is available for review.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791), or visiting www.epa.gov/safewater. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. This can include microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals can be naturally-occurring or result from urban storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. Pesticides and herbicides may come from a variety of sources, such as agriculture, urban storm-water runoff, and residential uses. Organic Chemical Contaminants, including synthetic and volatile organic chemicals are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems. Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Violation of Surface Water Treatment Rule Filtration and Disinfection Violation

On May 9th, 2003 the City of Santa Fe finished water quality was reported in two readings to be 1.616 to 1.996 NTU. This was a violation of the Title 40 Code of Federal Regulations (CFR) 141.173 (a) (2), Filtration. At that time plant operations staff maintained the appropriate disinfectant residuals. On May 29th City residents were notified of the problem and the actions officials took to correct the situation. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Brown Water Incident

Beginning on September 11, 2003 the City of Santa Fe Water System officials began receiving reports of discolored or brown water. Brown water complaints continued until the end of October. Reports of brown water were predominantly received from customers in Zone 3 and 4 of the City's water system. It was determined that the cause of brown water was due to elevated levels of manganese in the City's system. The federal Environmental Protection Agency has not established a health based standard for manganese. However, EPA has set a secondary standard of 0.05 mg/l in drinking water due to the ability of manganese to change the aesthetic quality of water.

Results of voluntary monitoring

Los Alamos National Laboratory in cooperation with the City of Santa Fe conducted tests in the Buckman Wells Nos. 1, 2, and 8 for the following parameters: high explosives, perchlorate, strontium-90, tritium, general inorganics, and radiologicals. The results confirmed no perchlorate, high explosives, Sr-90, or tritium were present.

Educational Statement for Arsenic

The City of Santa Fe's Drinking water meets the current drinking water standard for arsenic of 50 µg/l. A new standard for arsenic in drinking water of 10 µg/l will go into effect in 2006. Sampling conducted in 2003 indicated arsenic levels in City of Santa Fe drinking water below the new standard of 10 µg/l. While our drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's new standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Uranium

In 2003 the City detected uranium above the new drinking water standard of 30 µg/l in one sample. The new standard went into effect on December 8, 2003. This level did not result in a violation of the drinking water standard, since the average remained below the MCL. A source in the Buckman wellfield contains elevated levels of uranium in sufficient amounts to have caused this result. The City continues to properly manage the well to ensure continued compliance with the new standard. Some people who drink water containing uranium in excess of the MCL (30 ug/L) over many years may have increased risk of getting cancer and kidney toxicity.

Nitrates

City of Santa Fe drinking water meets the federal drinking water standard of 10 ppm for nitrates. Nitrates have been detected in some of the City Wells above 5 ppm. This value, which is ½ the standard, triggers an increase in sampling from once per year to 4 times per year. The City is in compliance with the nitrate standard. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Inorganic Contaminants	Copper (ppm)	Lead (ppb)
MCLG	1.3	0
AL	1.3	15
City Water Levels*	0.89	8
Number of Samples <AL	30	30
Sample Date	28-Oct-03	28-Oct-03
Exceeds AL	No	No
Typical Source	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems	Corrosion of household plumbing systems; Erosion of natural deposits

*The City lead and copper levels reported are values for the 90th percentile which in this case is the 28th sample.

Lead and Copper Sampling

Tests for lead and copper are taken from customer taps located throughout the City. Lead and copper are present in home plumbing fixtures and pipes. If you are concerned about elevated lead levels in your home's water you may wish to have your water tested or you can flush your tap for 30 seconds to 2 minutes before using tap water. Flushed water can be and used to water plants.

Contacts for Additional Information

If you have any questions, comments, or suggestions regarding this report, please contact Gary Martinez at 955-4370 or write to the above address. Feel free to call SDCW for information about the next opportunity for public participation in decision about our drinking water. For further information, consult the City of Santa Fe's Website at www.ci.santa-fe.nm.us or EPA at www.epa.gov/safewater or the Safe Drinking Water Hotline 800.426.4791.

Important Drinking Water Definitions:

AL: Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

NTU: Nephelometric turbidity unit is measure of the turbidity of water.

PPM: Parts per million
PPB: Part per billion

TT: Treatment Technique, a required process intended to reduce the level of a contaminant in drinking water.

2003 WATER QUALITY TABLE
Surface Water Treatment Plant

The table below are values for all of the drinking water compounds that were detected in our drinking water during the calendar year of this report or the most recent test if a sample was not analyzed in 2003. The contaminants detected represent a small fraction of the substances that we test for. For example, we tested for over 50 synthetic organic and volatile organic contaminants, which were not detected. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report or the result of the most recent test. The EPA or the State requires us to monitor for certain contaminants less than once per year because concentrations of these contaminants do not change frequently.

Contaminant (Units)	MCLG	MCL	2003 City Water Levels	2002-2003 Range		Sample Date	Violation	Typical Source
				Low	High			
Inorganic Contaminants								
Barium (ppb)	2	2	0.008	0.006	0.008	10-Jun-03	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium [Total] (ppb)	100	100	0.8	0.1	0.8	10-Jun-03	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	1.87	0.14	1.87	10-Jun-03	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nickel	MNR	MNR	0.28	ND	0.28	10-Jun-03	No	Erosion of natural deposits.
Selenium (ppb)	50	50	1.10	0.34	1.10	10-Jun-03	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Radioactive Contaminants								
Alpha Emitters (pCi/l)	0	15	0.2	0.2	0.3	10-Jun-03	No	Erosion of natural deposits
Beta/Photon Emitters) pCi/l	NA (pCi/l	NA	0.3	NA	NA	10-Jun-03	No	Decay of natural and man-made deposits. The EPA considers 50 to be the level of concern for beta particles.
Disinfectants & Disinfection By-Products								
Haloacetic Acids (HAA5s) (ppb)	NA	60	8.34	1.73	97.2	31-Dec-03	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethane] (ppb)	NA	80	27.66	ND	111	31-Dec-03	No	By-product of drinking water chlorination
Total Organic Carbon (TOC)	NA	TT	2.5 to 3.8	2.4	4.6	31-Dec-03	No	Naturally present in the environment. TOC has no health effects. However, TOC provides a medium for the formation of disinfection by products. These by products include trihalomethanes (THM) and haloacetic acids (HAAs). Drinking water containing these by products in excess of the MCL may lead to adverse health affects, liver or kidney problems, or nervours system effects, and may lead to an increased risk of getting cancer.

Units Description:
NA: Not Applicable; **ND:** Not Detected; **MNR:** Monitoring not required, but recommended; **ppm:** parts per million, or milligrams per liter (mg/l);
ppb: parts per billion, or microgrames per liter (ug/l); **pCi/l:** picocuries per liter (a measure of radioactivity); **ug/l:** Number of micrograms of subtanstance per liter of water;
TT: A Treatment Technique standard was set instead of a Maximum Contaminat Level
Range: The range represents the high and low values. Range values are not given if only one sample was taken during the range period.